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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

LE, LANA N

ART UNIT	PAPER NUMBER
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2685

DATE MAILED: 04/22/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/185,070

Applicant(s)

MEIRZON ET AL. 

Examiner

Lana Le

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 30 September 2002.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                             | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____  |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)         | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____                                    |

## **DETAILED ACTION**

### ***Response to Arguments***

Applicant's arguments with respect to claims 1-6, 8-12, 16 have been considered but are not persuasive in view of the previous reference Dent et al (US 5,991,635), the "controller provides a less than full electrical power supply to either of the amplifiers after a predetermined period of inactivity of the user VSAT interface" is admitted by applicant's remarks page 7, lines 2-3 that the first or second sleep mode occurs after a period of inactivity, the fact that the power is reduced and then later wakes up and increase the power again to receive incoming signals or provides full electrical power supply to either of the amplifiers in the presence of a communication session reads onto what's claimed (col 6, lines 29-39, col 14, lines 64-67). Regarding the added limitation of "less than full electrical power supply to either of the amplifiers after a predetermined period of inactivity of the user VSAT interface. The specification does not in any way disclose that the phone was powered off before a communication session, but only discloses "incoming received transmission and outgoing user initiated transmission of a communication session". Therefore, the mobile phone was in less than full power supply before it wakes up to receive the incoming page without the need to be fully turned off as argued by applicant.

Arguments pertaining to claims 17-19 have been considered but are not persuasive in view of Dent et al or Walls in which the front end inherently in Dent et al's circuits which

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includes the low noise amplifier is powered down, or that Walls' LNA is turned down in between the signalled pulses. Therefore, the rejections stands as set forth in the previous office action.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 1-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Soleimani et al (US 5,678, 228) in view of Dent et al (US 5,991,635).

Regarding claim 1, Soleimani et al discloses a VSAT terminal comprising an antenna 12 (see Fig. 2 and hereafter); a microwave power amplifier 28, a microwave low noise amplifier in the receiver chain 80; a transmitter 20 coupled via the power amplifier to the antenna; a receiver 80 coupled via the microwave low noise amplifier to the antenna; a user VSAT interface 16; and a controller 45 in communication with the user VSAT interface and in electrical connection with the power amplifier and the low

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noise amplifier for supplying power thereto, a controller operative to provide a full electrical power supply to the one of the amplifiers in the presence of a communication period (col 4, lines 25-35 and col 6, lines 29-39). Soleimani didn't disclose the controller being functional to dispense a less-than-full electrical power supply to either of the amplifiers after a predetermined period of inactivity of the user VSAT interface; and the controller being operative to dispense a less-than-full electrical power supply to the one of the amplifiers until the presence of a communication session. However, Dent et al discloses the controller being functional to dispense a less-than-full electrical power supply to either of the amplifiers after a predetermined period of inactivity of the user VSAT interface and until the presence of a communication session (col 4, lines 18-39). It would have been obvious to one of ordinary skill in the art at the time the invention was made to add the teaching of Dent et al to Soleimani et al in order to be able to save power when a period of inactivity is detected and to wake up from the sleep mode (less than full power supply) and provides a full power supply when a page is received.

Regarding claim 2, it is rejected as set forth in claim 1, wherein Soleimani et al further presents that the controller is controlled to react when the user VSAT interface send out a signal by providing electrical power to the power amplifier (col 4, lines 15-20).

Regarding claim 3, it is rejected as set forth in claim 1, wherein Soleimani et al further discloses that the controller is controlled to react when the user VSAT interface send out a signal for providing electrical power to the low noise amplifier (col 6, lines 55-67).

Regarding claim 4, it is rejected as set forth in claim 1, wherein Soleimani et al further discloses that the controller dispenses a less than full power supply to the low noise amplifier and the microwave power amplifier when there is no communication signal (col 4, lines 63-67, col 5, lines 1-5) and wherein the controller is controlled to react when the user VSAT interface sends out a signal by providing a full power supply to the low noise amplifier and the power amplifier (col 4, lines 60-63, col 4, lines 20-25).

Regarding claim 7, Soleimani et al further discloses that the controller is functional to turn down the electrical power supply to either of the amplifiers after a predetermined period of inactivity by the user VSAT interface (col 4, lines 59-67).

Regarding claim 8, Soleimani et al further discloses that the controller is functional to turn down the electrical power supply to the one of the amplifiers after a predetermined period of inactivity of the microwave low noise amplifier (col 5, lines 10-13).

Regarding claim 9, Soleimani et al further discloses that the controller operates in accordance with a predetermined power control scheme for providing electrical power to the microwave power amplifier (col 4, lines 42-53).

Regarding claim 10, Soleimani et al also reveals a VSAT telecommunication network 10 (Fig 1) comprising at least one satellite 4, and a plurality of VSAT terminals 6 talking with the communication satellite, wherein at least one of the VSAT terminals comprises an antenna 12 (see Fig. 2 and hereafter); a microwave power amplifier 28, a microwave low noise amplifier in the receiver chain 80; a transmitter 20 coupled via the power amplifier to the antenna; a receiver 80 coupled via the microwave low noise

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amplifier to the antenna; a user VSAT interface 16; and a controller 45 in communication with the user VSAT interface and in electrical connection with the power amplifier and the low noise amplifier for supplying power thereto, the controller being and functional to dispense a full electrical power supply to either of the amplifiers in the presence of a communication period (col 4, lines 25-35). Soleimani didn't disclose the controller being functional to dispense a less-than-full electrical power supply to either of the amplifiers after a predetermined period of inactivity of the user VSAT interface; and the controller being operative to dispense a less-than-full electrical power supply to the one of the amplifiers until the presence of a communication session. However, Dent et al discloses the controller being functional to dispense a less-than-full electrical power supply to the one of the amplifiers after a predetermined period of inactivity of the user VSAT interface and until the presence of a communication session (col 4, lines 18-39). It would have been obvious to one of ordinary skill in the art at the time the invention was made to add the teaching of Dent et al to Soleimani et al in order to be able to save power when a period of inactivity is detected and to wake up from the sleep mode (less than full power supply) and provides a full power supply when a page is determined to be received.

Regarding claim 11, Soleimani et al presents a method for managing power consumption in a VSAT terminal having an antenna 12 (see Fig. 2 and hereafter); a microwave power amplifier 28, a microwave low noise amplifier in the receiver chain 80; a transmitter 20 coupled via the power amplifier to the antenna; a receiver 80 coupled via the microwave low noise amplifier to the antenna; a user VSAT interface 16; and a

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controller 45 in communication with the user VSAT interface, the power amplifier, and the low noise amplifier, the method comprising of dispensing a full electrical power supply to the one of the amplifiers in the presence of a communication period (col 4, lines 25-35). Soleimani didn't disclose the controller being functional to dispense a less-than-full electrical power supply to the one of the amplifiers after a predetermined period of inactivity of the user VSAT interface and the controller being operative to dispense a less-than-full electrical power supply to the one of the amplifiers until the presence of a communication session. However, Dent et al discloses the controller being functional to dispense a less-than-full electrical power supply to the one of the amplifiers after a predetermined period of inactivity of the user VSAT interface and until the presence of a communication session (col 4, lines 18-39). It would have been obvious to one of ordinary skill in the art at the time the invention was made to add the teaching of Dent et al to Soleimani et al in order to be able to save power when a period of inactivity is detected and to wake up from the sleep mode (less than full power supply) and provides a full power supply when a page is to be received.

Regarding claim 12, Soleimani et al further discloses that the method according to claim 11 wherein the step of dispensing a less than full electrical power supply comprises dispensing a less than full power supply to the microwave low noise amplifier and the microwave power amplifier when there is no communication present (col 4, lines 63-67 and col 5, lines 1-5) and wherein the dispensing a full electrical power supply step comprises providing a full electrical power supply to the microwave low



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noise amplifier and the microwave power amplifier in response to operation of the user VSAT interface ( col 4, lines 20-25 and col 4, lines 60-63).

Regarding claim 5, Soleimani et al teaches a VSAT terminal according to claim 1, wherein Soleimani et al also discloses that the controller is functional to the user VSAT interface's operation by dispensing max electrical power supply to the low noise amplifier and the power amplifier (col 3, lines 57-col 4 line 4). However, Soleimani et al didn't specifically teach that in the absence of a communication period or while in standby mode, the receiver is still turned on, wherein the controller provides a less-than full power supply to the microwave power amplifier when there is no communication. Dent et al stated that it is well known in the art that only the receiver is operating when the transmitter is off during the time between conversations or between any interaction of the user interface or the receiver, the receiver is consuming power (col 3, lines 12-17). It would have been obvious to one of ordinary skill in the art at the time the invention was made to add the teaching of Dent et al to Soleimani et al in order to particularly save power on one unit while the other is left on to wait for or receive periodic incoming signals.

Regarding claim 6, Soleimani et al discloses a VSAT terminal according to claim 1, wherein the controller is responsive to receipt of an incoming transmission via the microwave low noise amplifier for dispensing a maximum electrical power supply to the low noise amplifier and the power amplifier, since Soleimani stated that the receiver chain comprising the low noise amplifier (col 6, lines 57-60) receives communication signals at regular predefined intervals in synchronization with the transmission from the

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central hub station (col 5, lines 25- 30). However, Soleimani et al didn't specifically teach that in the absence of a communication period or while in standby mode, the receiver is still turned on, wherein the controller supplies a low power supply to the microwave power amplifier and a full power supply to the microwave low noise amplifier in the absense of a communication period. Dent et al stated that it is well known in the art that only the receiver is operating when the transmitter is off during the time between conversations or any interaction of the transmitter or receiver, the receiver is consuming power (col 3, lines 12-17). It would have been obvious to one of ordinary skill in the art at the time the invention was made to add the teaching of Dent et al to Soleimani et al in order to particularly save power on one unit while the other is left on to wait for or receive periodic incoming signals.

2. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Soleimani et al (US 5,678, 228) in view of Dent et al (US 5,991,635) as applied to claim 11 above, and further in view of Walls (US 5,898,401).

Regarding claim 16, Soleimani et al and Dent further discloses a method according to claim 11, wherein Dent discloses the controller being functional to dispense a less-than-full electrical power supply to either of the amplifiers after a predetermined period of inactivity of the front end which inherently includes the LNA (col 4, lines 18-39). Walls discloses the controller being functional to dispense a less-than-full electrical power supply to the low noise amplifier (col 5, lines 17-23). It would have been obvious to one of ordinary skill in the art at the time the invention was made to add the teaching of Dent et al and Walls to Soleimani et al in order to be able to save power

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either to the whole terminal or a component of the receiver front end chain as in the LNA here when there's no user's activity.

3. Claims 17-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Soleimani et al (US 5,678, 228) in view of Dent et al (US 5,991,635) and further in view of Walls (US 5,898,401).

Regarding claim 17, Soleimani et al discloses a VSAT terminal comprising an antenna 12 (see Fig. 2 and hereafter); a microwave power amplifier 28, a microwave low noise amplifier in the receiver chain 80; a transmitter 20 coupled via the power amplifier to the antenna; a receiver 80 coupled via the microwave low noise amplifier to the antenna; a user VSAT interface 16; and a controller 45 in communication with the user VSAT interface and in electrical connection with the microwave power amplifier and the microwave low noise amplifier for supplying power thereto, the controller being operative to provide a full electrical power supply to either of the amplifiers in the presence of a communication session (col 4, lines 25-35). Soleimani didn't disclose the controller being functional to dispense a less-than-full electrical power supply to either of the amplifiers after a predetermined period of inactivity of the microwave low noise amplifier and until the presence of a communication session. Dent discloses controller being functional to dispense a less-than-full electrical power supply to either of the amplifiers after a predetermined period of inactivity of the microwave low noise amplifier and until the presence of a communication session (col 4, lines 18-39). Walls discloses the controller being functional to dispense a less-than-full electrical power supply to the low noise amplifier (col 5, lines 17-23). It would have been obvious

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to one of ordinary skill in the art at the time the invention was made to add the teaching of Dent et al and Walls to Soleimani et al in order to be able to save power either to the whole terminal or a component of the receiver front end chain as in the LNA here when there's no user's activity.

Regarding claim 18, Soleimani et al also reveals a VSAT telecommunication network 10 (Fig 1) comprising at least one satellite 4, and a plurality of VSAT terminals 6 talking with the communication satellite, wherein at least one of the VSAT terminals comprises an antenna 12 (see Fig. 2 and hereafter); a microwave power amplifier 28, a microwave low noise amplifier in the receiver chain 80; a transmitter 20 coupled via the power amplifier to the antenna; a receiver 80 coupled via the microwave low noise amplifier to the antenna; a user VSAT interface 16; and a controller 45 in communication with the user VSAT interface and in electrical connection with the microwave power amplifier and the microwave low noise amplifier for supplying power thereto, the controller being functional to dispense a full electrical power supply to either of the amplifiers in the presence of a communication period (col 4, lines 25-35). Soleimani didn't disclose the controller being functional to dispense a less-than-full electrical power supply to either of the amplifiers after a predetermined period of inactivity of the microwave low noise amplifier and until the presence of a communication session. Dent discloses controller being functional to dispense a less-than-full electrical power supply to either of the amplifiers after a predetermined period of inactivity of the microwave low noise amplifier and until the presence of a communication session (col 4, lines 18-39).

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Walls discloses the controller being functional to dispense a less-than-full electrical power supply to the low noise amplifier (col 5, lines 17-23). It would have been obvious to one of ordinary skill in the art at the time the invention was made to add the teaching of Dent et al and Walls to Soleimani et al in order to be able to save power either to the whole terminal or a component of the receiver front end chain as in the LNA here when there's no user's activity.

Regarding claim 19, Soleimani et al presents a method for managing power consumption in a VSAT terminal having an antenna 12 (see Fig. 2 and hereafter); a microwave power amplifier 28, a microwave low noise amplifier in the receiver chain 80; a transmitter 20 coupled via the microwave power amplifier to the antenna; a receiver 80 coupled via the microwave low noise amplifier to the antenna; a user VSAT interface 16; and a controller 45 in communication with the user VSAT interface, the microwave power amplifier, and the low noise amplifier, the method comprising of dispensing a full electrical power supply to either of the amplifiers in the presence of a communication period (col 4, lines 25-35). Soleimani didn't disclose the controller being functional to dispense a less-than-full electrical power supply to either of the amplifiers after a predetermined period of inactivity of the microwave low noise amplifier and until the presence of a communication session. Dent discloses controller being functional to dispense a less-than-full electrical power supply to either of the amplifiers after a predetermined period of inactivity of the inherent microwave low noise amplifier in the receiver's front end and until the presence of a communication session (col 4, lines 18-39). Walls discloses the controller being functional to dispense a less-than-full

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electrical power supply to the low noise amplifier (col 5, lines 17-23). It would have been obvious to one of ordinary skill in the art at the time the invention was made to add the teaching of Dent et al and Walls to Soleimani et al in order to be able to save power either to the whole terminal or a component of the receiver front end chain as in the LNA here when there's no user's activity.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lana Le whose telephone number is (703) 308-5836.


The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Urban can be reached on (703) 305-4385. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9314 for regular communications and (703) 872-9315 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4750.

Lana Le

April 16, 2003

  
EDWARD F. URBAN  
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